

COOP'S TECHNOLOGY DIGEST

-A Timely Report on The World of Communications-

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Next scheduled issue: January 27, 1999

COOP'S TECHNOLOGY DIGEST / SUBSCRIPTION INFORMATION

There are ten (10) issues per year on a schedule dictated by industry events. The readership includes telecommunication industry consultants, state and privately owned broadcasters/telecasters, brown goods importers, retail stockists, installation and maintenance firm personnel, educators, regulatory agency personnel, business investors and Sir Arthur C. Clarke. All copies sent via airmail / Fast Post, world-wide. Annual subscription fee is as follows: Within New Zealand - \$250; within Australia, through AV-COMM Pty Ltd., PO Box 225, Balgowlah, NSW 2093 (tel [61]-2-9949-7417 and fax [61]-2-9949-7095). Outside of NZ and Australia, US\$250 per year. Outside of Australia, make out subscription payment and mail to:
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December 04, 1998 ♦ VOLUME 98-10-53

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The Cloud Over Pace's "World Receiver"

Although the New Zealand arrival of the Sky Network digital IRDs is late (the first shipment of "2-3000 IRDs left the Mexican factory of Pace on their way to Los Angeles for shipment to New Zealand November 20th" - source is PACE, 27 November), Sky remains optimistic it will be able to install as many as 30,000 units before the end of December. Sky has been strangely quiet about the exact status of the digital IRD roll-out and there are a number of real and possible reasons.

A story appearing in The New Zealand Herald (November 6) began with -

"Thousands of Sky customers hooking up to the company's digital service will face a wait of several weeks before they will see an improved picture. About 40,000 households have signed on for the expanded service and many already have the dish technology bolted up.

"But sales have outstripped the broadcaster's ability to supply the reception gear, and many will not see the improved picture for several weeks because of a delay in supply of the upgraded decoder boxes... ."

Some back ground for those joining us late. Sky NZ, with the approval and perhaps insistence of majority stockholder News Corp, elected to utilise a Rupert Murdoch owned and controlled encryption system for the new Sky digital service. That settled which hardware (as well as encryption software) would be installed at the Sky uplink site. Subsequently, Sky announced the actual in-home decoders (IRD or integrated decoder receiver) would be primarily supplied by UK satellite receiver pioneer Pace (Micro Systems Technology [Australia]). The design of the IRD is purely a News Corp product, one of the first examples of how a major programme supplier gets itself involved in the business of creating "standards" for home receivers. News Corp was in the process of rolling out three brand new digital programme services - UK's BSkyB, South America's Sky Latin America and New Zealand's Sky TV. With all three coming on stream at about the same time (late in 1998), News Corp conceptualised an IRD that could be used interchangeably between these three services as well as possibly in India and Asia in mid-1999 when a new Star TV platform begins (1). Specifications for what News Corp called "The World Box" were circulated to the primary IRD technology houses around the globe. Pace, already the primary supplier of News Corp analogue service receivers, was chosen by News Corp as the supplier for South America and New Zealand. In the UK, Pace was joined by Amstrad, Grundig, and Panasonic (Matsushita UK).

As Pace confirmed to CTD November 27, *"The specifications for all of the variations of the World Box were circulated as a package to all possible IRD suppliers. Pace was already in the process of opening a new assembly plant for digital IRDs in Mexico and it is from the Mexican plant that the South American and New Zealand versions are being sourced. The BSkyB (UK) version is built at a separate facility in England."* CTD has previously reported the New Zealand version differs from the UK version only by being an *"economy, stripped down version"* of the UK IRD. All World Box IRDs share the same circuit board designs and the same encryption / decryption software routines (see back panel display, p. 10 this issue).

1/ Murdoch's STAR-TV (Asia) plans an extensive 50+ channel service for Hong Kong and other (Asian - not South Pacific) markets through AsiaSat 3 after the 3S satellite is successfully launched (March launch, April start-up). Tenders for installation of the new digital package from STAR TV Asia have been circulating in Hong Kong since late August.

When Sky's Nate Smith originally announced selection of the Pace IRD (CTD 9804, p. 2), Sky was anticipating *"delivery of the first IRDs in October-November."* The Dominion (newspaper) in Wellington reported at the time, *"Sources close to Sky said the first of 50,000 decoders ordered were due to arrive on October 15, with a penalty clause if the first shipment has not arrived by November 1st."* Nobody ever announced how "large" the first shipment was to be but when CTD surveyed equipment installers November 27th, we learned *"Approximately 700 sites are scheduled to be installed with the first IRDs over the next week."* That this would be out of the *"2-3,000 shipped to LA from Mexico"* is assumed but there was one bit of unsettling news concerning the first shipment.

"The IRDs arrived OK but the remote controls to operate them did not arrive." That from a source at Sky proper. But when CTD queried a TAB agency office that was amongst the first installed (November 27), we found they did indeed have a remote control. The "truth" here is possibly someplace between the two extremes - that is, Sky received more IRDs than remote controls. (2)

The reality here is that to install the IRDs, the installer needs to access the "installer menu" and while it is possible to do this without a remote control, lacking the remote the installation time is significantly lengthened.

Why the delay in shipping the first units to New Zealand? Sky's release appearing in The New Zealand Herald blames "a delay in the supply" from the manufacturer. Pace told CTD, *"These are the first products to come from the new factory. All of the delays are relatively minor and the only significant one we can identify revolved around a housing problem."*

Meanwhile - in the UK

The News Corp BSkyB roll out began on October 1. The service *presently* offers as many as 40 television and radio service programme channels, claims it will grow by on average 5 new channels per month through 1999 (see CTD 9808, p. 2 for **"Comparison - Them and Us"** for detailed analysis). Because the UK service precedes NZ by several months, there are significant lessons to be learned from their "teething problems" with a new technology and the companion new IRD unit.

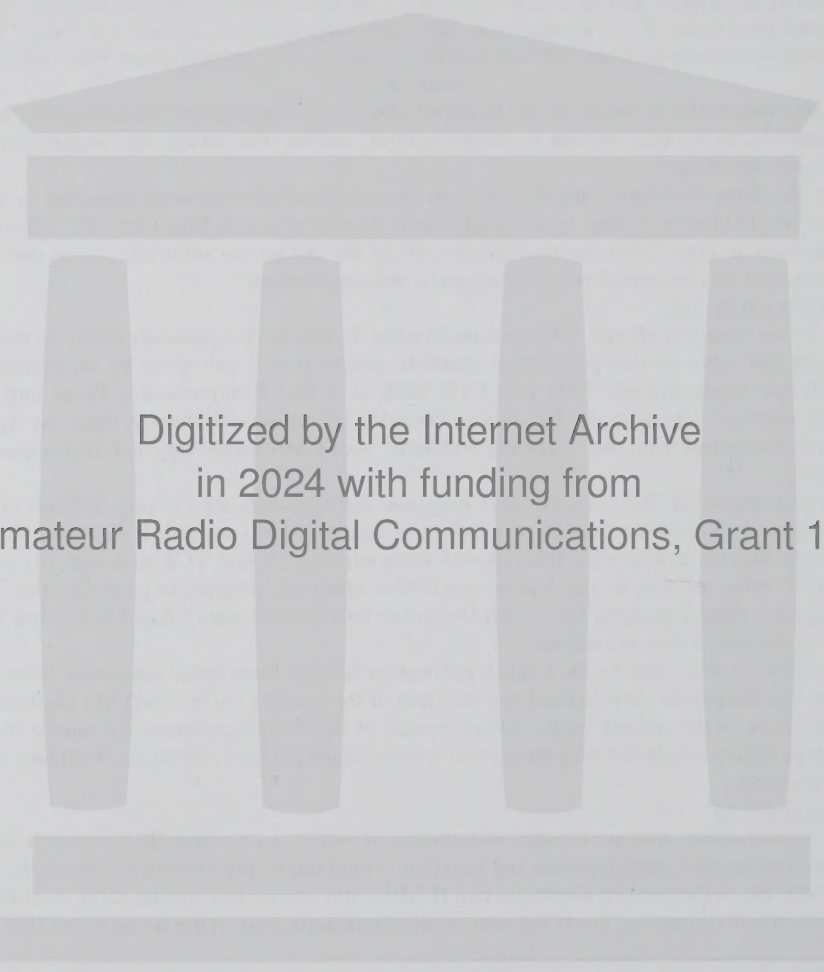
The first reports of IRD complications suggested the new units are (1) very difficult to initially programme - the job of the installer, (2) subject to user mistakes - a problem with the software, (3) not compatible (as advertised by BSkyB) with some existing TV and VCR hardware, (4) very "user unfriendly" when utilising the much promoted EPG or electronic programme guide function. Popular UK magazine WHAT Satellite TV in their December 1st edition devotes 9 pages to the first field user reports of the new device and service.

The problems uncovered by the English publication fall into three broad categories. *Some* of these *may* transfer directly to New Zealand and be a part of the learning curve facing Sky digital installers and customers in the coming weeks. Other aspects of the BSkyB problems are unique to the UK because of differences in the way the service is being marketed here, and there. We'll take them one subset at a time.

Set-up problems

Pity the individuals who are charged with the job of making a new Pace IRD work at a customer's location. The installer must assemble and install on a rigid mount the antenna (45cm in UK, up to 75 cm in NZ), attach the outdoor electronic unit (LNBF), run appropriate coaxial cable from the LNBF indoors to the IRD location, locate the nearest telephone outlet jack in the house to the IRD location

2/ Depending upon whom you ask at Sky, there are several "installation plans" in place to put IRDs into the locations that require them. Most Sky sources agree the very first units are going into TAB Agency shops. The next batch will go into sub-agency shops (week of November 30th). After that, the original Sky analogue satellite subscribers spread throughout the country (including the Chathams) will receive their digital-for-analogue replacement units. At this point, some place between 12,000 and 18,000 IRDs will have been distributed. Finally, those people who already subscribe to Sky analogue (via UHF) and who are paying \$495 to get Sky satellite digital - and - those new to Sky subscribers who are paying \$650 for the digital package installation will be serviced. Sky variously claims up to 22,000 such people are waiting for their equipment.



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UK Consumer Reaction to arrival of BSkyB Digital Platform and Equipment

Source: WHAT SATELLITE TV for December 1998.

"I have just received my Digital Offer package from Sky Subscriber Services. To say that I am disappointed is an understatement. In the accompanying letter I was invited to call and simply order my new digital receiver at 159 plus 25 connection fee. This I would have been delighted to do but for one thing. I had to pay by credit card and not the 184 but now they wanted 425 with the promise the difference would be refunded later. This is not something I would countenance and, in my opinion, neither would most people."

"The installation engineer arrived as promised at 11AM and commenced the wiring to install a phone point near the receiver. The standard of workmanship was poor, wire was left hanging loose around the door frames, cable was not cut to size before being terminated and I was left with a 2m length wound into a loose coil lying against the settee. There was a pile of brick dust where a hole had been drilled, but the engineer said he had no means of cleaning up and suggested I should vacuum the area myself."

"Sky has seriously misjudged the market if it expects to have the boxes connected to telephone lines as a condition to service. As I understand things, PPV events could be purchased by phoning Sky and the phone connection was optional. The fact is the box needs the phone connection to operate and this represents a serious design flaw."

"The engineer failed to get any channels working other than Sky News. When I asked him why no other channels could be received, he said that as long as Sky News was working correctly, that was the end of his responsibilities and he promptly left."

As I started experimenting with my new equipment, I gathered a few questions, wrote them down and called Sky Digital Customer Care. For almost eight hours all I heard was 'lines are busy - please try later'. Then - shock horror - someone answered my call. The lady could not help at all; she said someone would call me back that evening. I waited and I waited. I went to bed!

"I wanted a second remote control and the Sky Hotline gave me a new number to call about the handset. No, you cannot buy an additional handset but for 39.99 you can have a TV link installed. I already have a TV link, I don't need one, I don't need an engineer to call, I just want a second handset. I even said I was happy to purchase just the remote for 39.99 but no, Sky had to send an engineer. Now I finally understand why my subscription to Sky costs so bloody much each month!"

I have a motorised dish with universal LNB, so I went to Comet and bought a Pace digital receiver. When I phoned Sky to have the card activated, they refused, saying they had sent me the card in error. There then followed nine days of phone calls during one of which Sky told me it is illegal to connect my Sky Digibox to a motorised dish

and install an extension of the telephone line to the IRD location (typically near the TV set), connect the IRD to both the LNBF coaxial cable and the extended telephone line service - and then try to make the IRD function.

UK problems: The BSkyB version IRD allows the user to access non-BSkyB services. The NZ version, according to Sky, does not give this option although there are at least some indications in the manual supplied this is not true. The installer must enter into the IRD the transmission technical parameters *after* performing a "hard reset" of the decoder. A reset is like clearing out any extraneous bits of memory that may have stuck into the IRD at the factory during testing. Four separate buttons, using four fingers, must be pressed simultaneously to tell the IRD to "reset." UK installers report a high percentage (up to 30%) of their IRDs "drop into a standby mode" when the installer is trying to enter the transmission parameters into the memory circuits. When this happens, the entire set-up process must be repeated (for as many times as it takes to get it right).

The Sky NZ Installer Manual includes a great deal of non-Sky-NZ material which at best will confuse first-time installers. A variety of options are given for using the IRD with a range of support

What BSkyB and Sky NZ are Claiming

	BSkyB 30 days after digital launch	SKY NZ at digital launch
Conversion of existing analogue subscribers to digital	70,400	12,000 - 30,000
New subscribers	30,000	up to 10,000

equipment (such as different LNBF designs) but most (step-by-step) settings include a bold face type "SKY Default" notation which basically says, "ignore everything else in this category and do the following only." The primary pitfall in setting up a new IRD installation will be people looking for shortcuts and failing to read and comprehend the installation manual. As the British users have found, the IRD is not forgiving when the installer fails to follow the complete (and at this point labour intensive) set-up procedure given. This is not a "plug and play" product.

Both the UK and NZ versions of the IRD contain an on-screen installer guide to signal strength and signal quality. The two are mutually exclusive and it is possible to have adequate signal strength (as in reception from the antenna and LNBF) and still not have enough signal "quality" for the IRD to function. British installers have found the signal "Level" must register 50% (a bar across the screen from 0 to 100) for proper reception.

UK reaction to EPG: The BSkyB programming package is far more complex than the NZ version (up to 160 channels versus fewer than 20) and thus the complexity of the much heralded "Electronic Programme Guide" is significantly greater. EPG when first developed was supposed to be a quick and consumer friendly method of determining what programme is currently running on each channel, programmes scheduled for some period into the future (ultimately, 7 days) and then the clever bits; programming grouped by content. The concept is you can select the word "rugby" from a master file, click on to the subject and all programmes in the category would be listed on your screen whether they are scheduled today or any day up to 7 days ahead. The ultimate EPG will not only tell you what is on and when, but also provide you with synopsis or background material on each programme (such as a 25 word explanation of a movie's content, the primary actors, when it was made).

BSkyB follows a system originated in the USA at DirecTV grouping channels by category. In the BSkyB present format, channels starting at 100 are for "general entertainment," films are in the 300s, sports in the 400s and so on. The format chosen by Sky NZ is not announced. A viewer calls up the EPG master listing to review the channels available, selects a channel by directly entering the channel's EPG assigned channel number or using the on screen cursor navigates around the EPG screen display and having selected a specific channel service, "clicks on" in personal computer format.

The BSkyB EPG is in early days and has drawn criticism. When you select a specific programme channel, a "search and scroll" banner appears across the bottom of the screen listing the current programme title information as well as a listing of the shows to appear over the next few hours.

First 60 Days of UK Experience with Pace IRD

Features not yet operational	Features that work below acceptable level
DiSEqC LNBF switching	TV guide access
Cam access to non-BSkyB services (common interface)	artefacts with line doubling (100Hz) TV sets
BIB shopping services	Uneven video quality channel to channel
seven-day TV listings	installation set-up confusion
enhanced teletext	Susceptibility to strong terrestrial signal loop-thru interference (4)
e-mail service	
on-line banking	
personal TV planner	
S-VHS level output to TV set	
Multi-language sound tracks	

4/ Although Sky NZ experience with their version of the IRD is still very new, one of the UK problems has quickly been identified as being present here as well. The IRD has a provision to allow the user to connect their existing (VHF/UHF) terrestrial aerial to the IRD for "seamless switching" between terrestrial TV and Sky satellite TV. UK installations as well as early NZ systems reveal that if the terrestrial aerial input signal level exceeds 72-75 dBuV, interference to the Sky service results. In many cases, installers will be forced to install a passive "attenuator" in the rooftop terrestrial TV aerial line to cure this problem, with the result being degraded terrestrial TV reception in order to accommodate switching between the two.

Complaints in the UK centre around the system's failure to move quickly and easily from channel viewed to EPG information (and back again), an inability to move from category to programme and then back to category, and switching speed (described as "in excess of 2 seconds response time after you push the selection button"). Commentators point out that only a small portion of the EPG is actually operational, and fear that as more functions come on-line, the speed will deteriorate further. Other complaints - when you are using the EPG function, a solid blue background appears and the TV audio from the last channel viewed disappears as well. The suggestion is that EPG listings be transparent to allow continued viewing of selected programming while "fishing" with the EPG function. And teletext - not an announced part of the Sky NZ package. It seems the BSkyB teletext uses a "reinsertion" method which requires that the user have a teletext equipped TV set. Teletext and digital transmission is basically an unsolved problem presently on an industry level - not merely within the BSkyB format.

In fact, a number of the World Box features designed into the original News Corp plan have been delayed in implementation in the UK. Some are technical features which the IRD is supposed to do (but does not at this time), others are operational features not yet implemented by BSkyB with appropriate software at the transmission point. e-mail service, an on screen shopping and order service, seven-day TV listings, enhanced teletext are all scheduled for around the middle of 1999.

Unlike the NZ version, BSkyB offers the IRD units at two pricing levels.

1) If the consumer agrees to permanently connect the IRD to a telephone line (a modem is built into the IRD), the "subsidised" price is UK159.99 (for an existing analogue service subscriber) or UK199.99 for a new subscriber.

2) If the consumer elects to not have their telephone line married to the IRD, the non subsidised price is UK370 (previously reported as UK400).

The reason for the incentive to connect to and stay connected to the telephone line (modem) is multi-layered. First, News Corp runs crawl messages across virtually all programming promoting special movies, sport events on "pay per view" channels. If the customer has the modem connected, they will be able to pick up the remote control and click "yes" to order a PPV event. The IRD will then dial up the BSkyB desk and place an automatic order for the promoted event into the BSkyB computer. The IRD is equipped with two front panel card slots - one is for the normal BSkyB smart card while the second accepts a standard credit card. By using the "click to order" system, the customer's payment for the PPV event goes directly to their credit card which rests in the second (mondex-type) front panel slot. Customers who do not wish to have the IRD modem left connected can still order PPV events; they will call a toll free number and stay on line to place their order with an operator.

News Corp believes the take up rate of consumers equipped with the "click to order" service and modem will be so significantly greater than for those who have to go to a telephone to place an order that they have discounted the IRD as much as UK210 to reward those electing the modem connect installation. Time of course will evaluate this decision.

Additionally, the IRD + modem approach satisfies a bureaucratic decree created by the European Community (EC). There is an EC subsidy for the News Corp subsidy, directly from the EC to News Corp., for every home that accepts the modem installation. The reasons for this EC subsidy are obscure but seem to somehow relate to a belief that the EC communications system for reaching the public will be dramatically improved if everyone is on line all of the time. How might this be used? More obscure, but the suggestion is that an EC announcement or directive transmitted to IRD + modem equipped homes would be batch e-mailed to everyone at once through the satellite delivery service. None of this is practical today, of course, simply because the e-mail function of BSkyB is not yet operating.

Finally, there is the belief that BSkyB will be able to dial up individual subscriber IRDs from a central computer and "ask" the IRDs what channel(s) they are or have been watching. The consumer would be unaware the IRD is being "polled" and would not know their viewing habits are being queried and logged into a master data base at BSkyB. The commercial value of this information could be significant but will depend totally upon *how* the information polled is actually used. People who routinely sign up for adult viewing fare PPV, for example, *could* find their mailbox overflowing with

offers of similar products because BSkyB has "shared" their viewing habits with mail order firms that sell that particular genre of merchandise. News Corp is saying as little as possible about their intentions with the polling aspect of the IRD + modem, connection at this time.

The Sky NZ IRDs are also equipped with a modem and part of the "standard" installation is to connect the decoder to the telephone line. However, Sky has revealed none of its own plans for use of the modem other than to point out the ability for the consumer to make quick buying selections for PPV programming with the modem operational.

Changes in the wind

A second generation Digibox is already well advanced for the UK: whether that will translate to a second generation model, quickly, for New Zealand is not clear. Pace admits they should have designed the BSkyB version with greater memory capacity to accommodate the demands of the EPG service. A new box, possibly ready for shipment as early as January, will double the various memory components (DRAM to 2Mb, 4Mb of video DRAM and 4Mb of flash memory). A spokesman for Pace Australia, speaking on behalf of the New Zealand version IRD, told CTD he is not aware of a second generation unit for the Pacific "anytime soon."

How soon, how many for New Zealand?

An accurate assessment of Sky NZ success in promoting the new digital satellite service will probably not be reflected in the end of year (December 31) financial statement (which is

Less than enthusiastic editorial in WHAT SATELLITE TV magazine for December 1998

It seems like years ago that *What Satellite TV* first reported on the forthcoming arrival of digital satellite TV for the UK. Heck, it WAS years ago – had we held our breath then waiting for Sky Digital, we'd now be bluer than the Eros Channel and deader than Country Music TV. Still, UK digital TV has now (as you have probably noticed, thanks to Sky's £60million marketing campaign) finally arrived.

If you're one of those who rushed out to buy into the latest techno-temptation then you already know the joys (and sorrows) of owning a Digibox. If you held off, or you're one of those who rushed to buy but still haven't actually got your hands on the machinery, then we've got the lowdown on the Digibox in this issue.

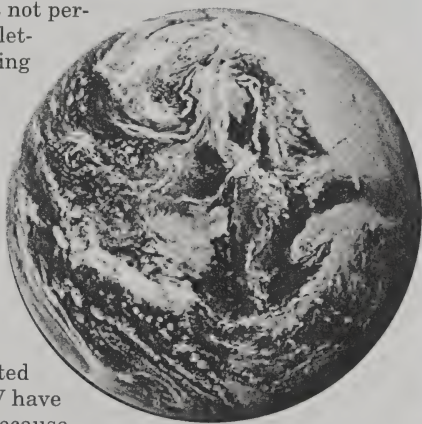
Surprise, surprise, it's not perfect. One of the biggest let-downs is the way it's being sold. We've got some of the stories from those who found buying into the digital dream was not quite as simple as it's meant to be.

While that's sorting itself out, there are other worries of a more technical nature. Not least is the fact that many of the much-vaunted advantages of digital TV have not materialised – not because they've been scrapped for any commercial reasons; it's simply that they don't yet work. Given the wait we've already been through, this is just not on.

Nevertheless, what the Sky Digibox does do, it does well. This has opened up a whole new chapter in satellite TV viewing, and it will undoubtedly open up satellite to many folk who not been tempted before.

But although we've gone a big step forward in terms of technology, we've gone several steps back so far as expanding our TV reach beyond these shores is concerned. Sky's system does no favours for those interested in TV from abroad – or even from outside the Sky stable. Whereas analogue satellite TV could justifiably claim to expand horizons, Sky Digital is hemming us into our own little world. More's the pity.

Still, the rest of the world is still out there for those who want it. By all means invest in a Digibox, but remember that an analogue system or a free-to-air DVB digital receiver still holds a whole world of possibilities ●



unlikely to be available for review much before June 1999). Sky sources quoted in business reports vary from 12,000 to 18,000 when describing the number of locations that had *previously* signed up for analogue service and now must be converted to digital. Likewise, reports as to how many existing terrestrial analogue subscribers or how many brand new to Sky customers who will receive digital equipment are on lists for installations vary widely even through Sky sources. The most generous claims say 40,000 IRDs are on the "to-be-installed" list.

Even accuracy in describing the number of IRDs arriving in New Zealand in the first shipment (week of November 23) vary widely. Pace told CTD they had released "2-3,000 units" for shipment, Sky sources claim they had received *"700 units which are being deployed first to TAB Agency accounts, then to sub-agents."* CTD has been able to verify only that some TAB agencies did receive their IRD units on Thursday and Friday November 26-27. A Sky source claimed the IRDs had arrived without companion remote controls, but we located Tab Agency accounts with both IRDs and remote controls on November 27th. Further confusing the issue - Sky is also scheduled to receive a much smaller - but measureable - quantity of "Zenith" brand IRDs as well.

We asked Pace to estimate for us how long it would take, at their current production schedule, to reach 40,000 units in New Zealand. They declined to provide an answer. We suggested *"one month"* and they laughed. *"Two months?"* There was a pause to think about the response, and then more nervous laughter. There is clearly no answer at this time because as the Pace representative repeatedly told us, *"This is a brand new product from a brand new factory. There have been no real major problems, but every day there are small ones that allow the shipping schedule to slip day by day."* It seems logical that people who signed up for new Sky digital installations in October could still be waiting for their equipment well into February - if not later.

PanAmSat PAS-8 Testing Report

PanAmSat PAS-8, the second Pacific Ocean region C + Ku band bird for the Hughes controlled Pan American Satellite Corporation, was successfully launched November 4th to an operational station of 166E. PAS-2, the original privately owned Pacific and Asia region satellite, has been at 169E since July, 1994.

PAS-8 has C-band coverage that focuses on Australia and the SE Asia region, to the detriment of New Zealand and the central Pacific; Ku-band coverage totally excludes New Zealand except for very large commercial size dishes. PAS-2, in comparison, serves C-band dishes as small as 2.4M and Ku-band dishes to under 90cm in size.

Keeping with corporate policy, no PanAmSat announcements concerning new customers using PAS-8 have been made although PanAmSat sources advise CTD the satellite is *"75% sold out at this time."* That is both good and bad news for New Zealand and Central Pacific users of PAS-2. The good news is that the badly overloaded and overworked PAS-2 will shift some of its present traffic to PAS-8. Service levels on PAS-2 remaining to New Zealand and the Central Pacific should, in theory, come back up again as the dangerously overloaded PAS-2 loses some of its present users to PAS-8. The bad news is PAS-8 will require significantly larger dishes for New Zealand and the Central Pacific, than PAS-2, if the pre-launch footprints (coverage maps) are to be believed.

Present users of PAS-2 in New Zealand and the Central Pacific may lose services they now have unless a larger receiving dish is installed. PanAmSat is being very cautious about announcing which services are scheduled to move but CTD from an independent (user) source understands the list includes the following: TNT/Cartoons, CNNI, EWTN, Discovery. PanAmSat is reported to have assured services scheduled to move, *"You will not lose any of your present clients / users with the shift to PAS-8."* If, however, the signal level drops below reasonable size dishes for these and other services moved to PAS-8, and a larger dish is required to retain the customers, one option open to PanAmSat is to pay the cost of replacement (larger) dishes for customers presently using the PAS-2 coverage. CTD has been told this option is *"on the table for discussion"* but PanAmSat is balking at paying for both new (larger) dishes and the cost of installing the dishes. PanAmSat is said to be close to agreeing to providing larger (Scientific Atlanta or similar) dishes, but not the labour and construction costs associated with replacement dishes. Users of EWTN, a non-subscription free to air service, would largely be ignored in such an arrangement because at this point PanAmSat is attentive

"CAREERS THAT ARE OUT OF THIS WORLD"

"Foxtel is launching into space for the next stage of this exciting era in the global media industry. Our new satellite transmission system will keep us in the forefront in home entertainment in Australia, and we now need talented professionals to join our close knit team."

A large newspaper advertisement appearing in Sydney newspapers November 28th took the cork out of the bottle for cable and satellite operator Foxtel. The advertisement encourages "professionals" in the relatively new areas of digital transmission and reception systems to query them for five key positions now available. They include (1) Conditional Access Manager,

(2) Conditional Access Engineer, (3) Conditional Access Systems Administrator, (4) Field Construction Engineer and (5) Integrated Receiver Decoder (IRD) Engineer.

It is no coincidence the advertising coincides with the first phase of successful check-out of PAS-8 as Foxtel has made no secret that if it is unable to secure suitable space and terms on Optus B3 for DTH (direct to home) packaging of a pay-TV service, it would utilise space on PAS-8 Ku band beamed directly into Australia.

Interested parties were to contact Angela Godfrey, Human Resources Department, Foxtel, GPO Box 99, Sydney NSW 2001 by December 4.

Current Foxtel satellite target date - they are telling installers - February 1st.

only to commercial (paying) customers for the pay-TV (and Internet) networks who would be adversely affected by the transfer.

Early PAS-8 testing has been irregular and the satellite operator advises, "*We do not expect to begin on ground testing until after December 15th.*" This means tests to measure the actual service levels into marginal coverage regions (including New Zealand and the Central Pacific) from PAS-8 will not be completed until after the first of the New Year. Decisions concerning how PAS-8 service transfers will affect PAS-2 customers will not be made until the ground testing is completed.

At the very least, PAS-8 users in New Zealand and the Central Pacific will require an additional receiving dish and electronics, of a size to be determined, if their operations require simultaneous reception from PAS-2 and PAS-8. Tests seen to date have involved widely varying transmission power levels with Australian reports generally "*Strongest signals we have ever measured*" while New Zealand reports tend to be "*Marginal signal levels, far below PAS-2 levels here.*"

The most important decision waiting to be announced is the future of Foxtel satellite as it positions itself to compete with existing satellite operators Austar and Optus Vision. Foxtel has "leaked" word since June that it plans to be a user of PAS-8 satellite and in fact conducted tests using PAS-2 for approximately ten days. The testing sequence verified that PAS-2 would be a suitable satellite platform to serve Australian home DTH dishes down to approximately the 60cm size range: PAS-8 is slightly more powerful (to Australia) on Ku-band than PAS-2 and will provide even better coverage. However, by moving away from Optus to PAS-8, Foxtel leaves itself outside of the established DTH world that presently utilises three horizontal transponders on Optus B3. The decision favouring PAS-8 is believed to be tied to success or failure of negotiations between Optus Vision and Foxtel concerning programming rights and programme package sharing issues. Optus Vision continues to advise the business press in Australia that they believe there will be an agreement between the two that results in Foxtel staying on the Optus B3 satellite. Foxtel sources are far less certain such a deal is likely and have moved ahead with PAS-8 plans as a contingency to there not being a deal with Optus.

Included in the ground work done by Foxtel, an agreement with PanAmSat that Foxtel could employ a News Data form of conditional access on PAS-8; present PanAmSat business rules favour the exclusive use of the Scientific Atlanta PowerVu conditional access system on PanAmSat satellites. This in turn points to Foxtel, if it does use PAS-8, bringing into Australia not only the News Corp conditional access system but an entirely new generation of IRDs for Foxtel satellite subscribers. There are presently something approximating 50,000 Foxtel satellite customers who were "acquired" when Foxtel bought out the ex-Galaxy IRDs in June and with the IRDs assumed service obligations to those customers under a temporary shared programming arrangement hammered out with programmer Austar. However Foxtel shakes out over the next few months, the most likely scenario is that Australians like their New Zealand cousins will be utilising Pace built IRDs from Mexico (see pg. 2, here).

TECHNOLOGY BYTES

...BITS sand BYTES you may have missed in the rush to make a dollar ...

December 04, 1998 ♦ VOLUME 98-10-53

Satellite TV & Radio

PAS-8 testing (166E) is confusing to unravel and PanAmSat says they will not begin their own "on ground measurements" until the middle of December. In general, Australian reports say there have been "strong test carriers" and in one South Australia location, "the strongest signals we have ever measured from any (C-band) satellite." New Zealand reports are less complete, primarily reflect on "weak level signals." However, at this pre-ground-test stage, any results should be taken as not indicative of the real world operating coverage of the new satellite. As various transponders are being tested (typically with unmodulated carriers, occasionally with colour bar patterns), the power levels are purposefully turned up and down for measurement and depending upon when you "tune in" your signal level (even in South Australia) could be at a minimum or maximum signal level. Ku-band testing has not been reported as CTD goes to press.

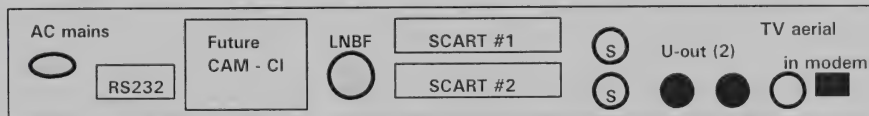
Fashion TV (fTV) is a Paris original service which is sampling the Asian market through a temporary SCPC feed found on AsiaSat 2 (3796.2/1353.8 Vt, Msym 2.533, FEC 3/4). Because of low power level (10% of the available transponder output, 13 dB below a full transponder) and the very narrow bandwidth employed, service requires sizeable antenna and excellent stability LNB local oscillator to receive. It is FTA at this time, will stay that way until at least January 15th and probably longer. Plan is for fTV to join Paris originated MCM (rock) music channel plus newly created MCM Classical/Jazz channel in 3 programme channel bouquet to be uplinked through Bezeq, Israel onto AsiaSat 2. There remains possibility the service will opt for AsiaSat 3s (105.5E as a replacement for AsiaSat 1, March-April). Probability is all three services will be in some form of 'soft encryption' requiring at least IRD + card if not actual month to month subscription. Detailed report appears in SatFACTS Monthly for December 15th (info from Alona Fischbein at [fax] ++33-1-4501-1273).

RFO-1 Tahiti bouquet on Intelsat 701 (180E) is now operating on 3857.9/1292.1LHC with Msym 4.566 and FEC 3/4. This eastern (zone) beam service is difficult or impossible to see west of 180 although the incoming feed from Paris on 4095/1055 LHC is well received over most of the Pacific.

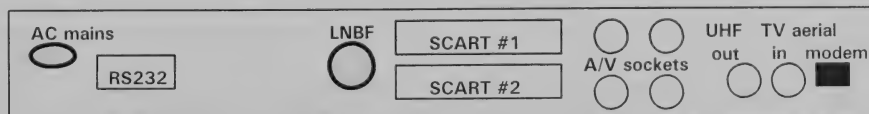
Greek ERT service, relayed through USA and then west utilising Intelsat 180E, is seen daily around 1900UTC on 3765/1385 RHC (Msym 29.900, FEC 7/8), programme channel 5. Channel 6 on same bouquet has been active of late with KBS (Korea) feeds into Korea from USA.

CNBC business news service is revising format for weekends, adding what it calls "Executive Sports" for approximately 12 original, new hours each weekend. Primary coverage will be in golf tournament category including World Cup, Malaysian Open, South African Open and Ladies Irish Open.

Back panel comparison - UK BSkyB IRD and Sky NZ IRD - both by Pace



BSkyB (DSR) 2200 by Pace



Sky NZ DSR 620 by Pace (note: installer PIN is 0000 factory set)

NDS's "Official" Description of Sky NZ and BSkyB "Digibox" IRD

"NDS has worked closely with a number of set-top-box manufacturers to ensure that the Digibox's on the market for SkyDigital are efficient, have low cost of production, rich functionality and take advantage of future SkyDigital offerings, such as interactivity. To maximise the life of the Digibox, the BSkyB (and Sky NZ) specification includes an erasable and programmable chip so that the Digibox can be easily, securely, and cost-effectively upgraded by software downloads broadcast alongside the video stream.

"BSkyB and NDS engineers have also worked closely with OpenTV to ensure that the OpenTV Digibox operating platform is robust enough to accommodate a 200+ channel multi-broadcast environment with a large number of subscribers. The platform is able to offer sophisticated future interactive services, such as home banking and home shopping, interact with EPG and be available to offer rich functionality for interactive programming applications.

"NDS and BSkyB have also worked together to ensure that the design of the Digibox allows third party broadcaster services to be integrated seamlessly into the SkyDigital package. The Digibox supports remote adaptation of other broadcaster's programme streams, giving cross carriage of conditional access and allowing EPG data to be viewed seamlessly."

Indonesia Cakrawarta S-band satellite continues to test various transponders and two new ones have been activated (IFs of 1107 and 1120). Most recent report of FTA activity - SCTV (Indonesia network).

NZ IHUG Internet data stream serving perhaps 500 privately owned dishes as well as a smaller quantity of ISP (Internet Service Provider) locations, is now on PAS-2 Ku, 12.448 Hz. Most private dishes being installed are 90cm in size.

Sky NZ service is operating with as many as 10 programme channels at press time, loading at 12.391 (Vt) with Msym 22.500 and FEC of 3/4.

Leonids meteor shower, predicted to pass through earth's atmosphere around 19.30 UTC on November 17, failed to live up to media hype and extreme warnings. Scientists in this obscure field say they were not surprised as most models of the collision course between planet Earth and the remnants of the Tempel-Tuttle comet predicted a modest increase in ZHRs (number of incinerated meteorites visible from earth at a prime location) of under 100 per hour in 1997, rising to 235 per hour in 1998 and peaking at approximately 1000 per hour in 1999. Bottom line? 1998 was a dress rehearsal, most of the media reports got it wrong, and 1999 will be (and always has been) the most likely year for a real-life "meteor shower" experience. The best visual viewing location in 1998 was Japan and China; it moves to the Middle East in 1999. There were no reports of damage to operational satellites from the relatively modest encounter of 1998.

AsiaSat has signed an agreement with Hughes for a HS601HP spacecraft which could become the replacement for AsiaSat 1 late in 1999. AsiaSat 3S, the replacement for the lost-during-launch AsiaSat 3 satellite one year ago, is currently scheduled to launch in mid-March by Russian Proton vehicle and take up operation at 105.5E, replacing now tired and ageing As1 at that location. Assuming As3S launches properly, As1 will be moved to 122E where it will take up temporary service replacing AsiaSat-G (for Gorizont), a Russian satellite pressed into service by AsiaSat at this location during 1997 to serve as a warning to other satellite operators they should not take up squatting at this location. There have been several instances involving ApStar and other satellites launched by the Chinese which have moved into unoccupied geostationary locations without appropriate prior approval. **As4?** Well, assuming As1 ends up at 122E, it will be there for at most one year while As4 is made ready for launch and then As1 will become history.

Optus C-1 will be built by Japan's Mitsubishi Electric and Loral. There is one unusual twist - C1 may have extra capacity on board to be offered to the East Asian market (10 transponders) plus a spot beam on Hawaii. Projected C1 cost- US\$308 million. Scheduled launch - early 2001, to 156E (location of present Optus B3).

Satellite fine print. The Orion-3 satellite to 139E (sometime in 1999, it keeps slipping) will occupy a geostationary spot "owned" by the Republic of the Marshall Islands. Orion's Loral owner has also filed through government of Papua New Guinea application for three additional orbital locations.

BSkyB digital channels. Although the exact number of "real" programme channels is almost impossible to calculate (TV programme channels share the same channel number at different time slots, are counted as individual channels when in fact they are different services), BSkyB has announced an additional 10 new service "channels" to launch over the period December - March. The variety announced crosses the spectrum from

Ted Turner for President (of USA)?

In another of his famous tongue slips, Ted Turner has admitted he is thinking "*seriously about running for President*" but quickly adds, "*Jane (Fonda, his wife) doesn't want me to do it. I guess I was just thinking out loud.*"

Early Summer Storm Devastates North Island Dishes

A summer storm with peak predicted winds of 50km/h fooled the forecasters as 140km/h gusts and 100km/h sustained winds tore through North Island (NZ) November 27-29. Many antennas were damaged including the 4.6m Paraclipse dish installed for AsiaSat 2 reception at the University of Auckland (above).

Christian (six theme services, but one actual channel) to "the Pub Channel."

BSkyB Pace IRD technical parameters are slightly different - in fact - than as had been announced prior to the release of the unit. Whether the Sky NZ DVS600 series (620) IRD has similar capabilities remains to be sorted. (1) a single LNB input, equipped with 22 kHz switching (no LNB[F] input looping); (2) DiSEqC switching - built in, they say, but strangely "*not functional until mid 1999.*" That suggests the DiSEqC mode is somehow controlled by the data stream; (3) CAM - a slot is provided on the rear panel for future plug-in of a separate service CAM identified by Pace as the "Videoguard." Pace says this will be a CI (common interface) featured device but no details are available; (4) Msym range - two preset at 22.000 and 27.500; (5) FEC

range - selectable 1/2, 2/3, 3/4, 5/6 and 7/8; (5) EPG support - included; (6) UHF modulator channel range - European 21 - 69 (471.25 - 855.25 MHz in 8 megahertz step; this exceeds the range of UHF channels available to New Zealand or Australia); (7) Modem - 28.8kbs; (8) AV outputs - TV (UHF modulator [2]), VCR and TV SCARTS (2), 2 stereo audio; (9) other connections - RS232, terrestrial TV aerial in (loop through).

BSkyB technical problems with IRDs. First reports from UK told CTD, "*When the mains power is cut, the IRD forgets all of its memory and shorts out the telephone line, requiring a visit from an installer to reprogram the memory and unlatch the telco line.*" While we believe our source may have been accurate, CTD has not been able to uncover reports that this situation is common. That the units will forget their BSkyB memory parameters is verified in our report starting on page 2 (here) but only when the installer or user attempts to also load a second bouquet from a source outside of the BSkyB family of services. That the programmers creating the software might have deliberately left this "trap" for users, to discourage anyone attempting to receive any service other than BSkyB with their News Corp provided IRD, is a possibility. Supplier Pace is telling UK distributors to expect an improved IRD version as soon as January; Pace in Australia knows nothing about an upgrade for New Zealand at this time.

BSkyB paid too much. A court has awarded damages of 20.8 million pounds plus 8 million pounds interest to News Corp from smart card suppliers who provided the basic cards to BSkyB between 1988 and 1996. The court characterised the overbilling as a "plot" arranged by an individual who apparently sold BSkyB cards through non-British firms located in countries such as Liberia.

Asian economy fall out. HBO Asia admits it has moved away from Palapa (C2) satellite to ApStar 2R "*because in the present state of the Asian economy, we were able to save significant money by moving to a new satellite.*" Taiwan's SpaceTel firm reports that as it shops for transponder space in the Pacific these days, the rates being quoted are "*45% lower this year than last.*" That there is a glut of available transponders on satellites covering the same region of earth is obvious.

Compression costs. In case you have wondered - US\$600,000 up to US\$1.5 million to install the hardware required to compress approximately 6 video channels onto a single transponder.

Western Australia community leaders in Bayswater have adopted new policies governing the installation of satellite dishes and "radio masts." The new rules prohibit dishes greater than 1.5m in diameter or masts higher than 9m and require that dishes be "*hidden from view from any public space and screen from adjoining*

Saturn Numbers May Not Add Up

Wellington based Saturn Communications Network claims to now pass 140,000 homes with a projected home passing of 600,000 in 2003. Saturn bundles smart phone with traditional cable TV services at NZ\$54.95 per month, which typically is 5 - 10% below Telecom NZ line rental charges according to a study by Global Broadband Markets (1998). Saturn is now charging a flat unlimited in time nation wide telephone rate of NZ\$4.50. The Global study estimates Saturn's present homes connected at 2,000, projects it will grow to 91,000 by 2003. The Global study does not see much future for Saturn in television programming delivery, rather believes "half of Saturn's total residential broadband service revenue will be generated by cable (Internet connection) modems" with most of the balance coming from "ISDN or xDSL subscriptions."

properties by vegetation, fencing or portions of a building." The dishes may not be located within a guard space of 1.5m to neighbouring boundaries and shall not be more than 1.8m in height if mounted on the ground. If attached to a building, the dish shall not be higher than the eaves, and only one satellite dish is permitted on a residential zoned property.

Max King, trade name for Internet Web Site operated from UK dealing in piracy related satellite software and hardware, was reportedly closed down for 72 hours late in November following the arrest and arraignment of the operator. CTD reported on the status of piracy cards in Europe and the Pacific in our October 30 edition (CTD 98-09) and we mentioned the relative ease with which people could access information dealing with Irdeto and other piracy cards through this and other European sites. The operator of the site, and reportedly his wife as well, were arraigned and charged with violation of British laws relating to the sale of equipment and supplies intended for the purpose of violating someone's private property (copyright). Closure of the site followed within hours but 3 days later it was up and operating again with an announcement of the arrest. British sources believe the arrest was prompted by charges filed with the court by News Corp. Those with an interest in the latest activities in this tenuous area can check for themselves at www.maxking.demon.co.uk.

In that same area of interest, people experimenting with the MK12 reader/writer in Australia report that if the device is equipped with the correct "read" and (separately) "write" software, unit will indeed "clone" an Austar, Foxtel or Optus Vision card (make a second copy). However, the software available only appears to work if the new to-be-cloned card is "virgin" (never previously used) and a source of virgin cards in Hong Kong has surfaced. The HK source reportedly will not deal in quantities of fewer than 1,000 cards (price - US\$5 each) which certainly takes cloning out of the backyard level and into the commercial world very quickly.

And, Irdeto common interface (CI) version conditional access module (CAM) is to be built by firm in Switzerland where similar CI units are manufactured for use by Canal +, Viaccess, Seca and others. Release date unknown.

People. **Cynthia Dickins**, the spokesperson and best informed individual at PanAmSat Sydney following launch of PAS-2, is now vice president of GE American Communications' Asia-Pacific operations. Dickins left PanAmSat to take up a desk at regional shopping service TVSN one year ago, disappeared when TVSN began down sizing. GE-1A is scheduled for launch July (1999) to 97E with 28 Ku-band transponders designed to serve most of Asia - between 8 and 16 transponders to China proper, as many as 8 to India, as many as 16 to north-east Asia/Philippines. A second satellite, GE-2A, will collocate at the same orbital position in 2000 and serve Southeast Asia, India and Australia.

Echostar AD-2000 IP is the latest exact copy version of the Phoenix 333, Praxis 9800AD+P. The Phoenix version, reviewed in SatFACTS Monthly for November 15th, is the first Pacific region receiver to combine analogue, digital and dish controller ("positioner") functions into a single set-top unit. The Phoenix version and the Praxis 9800 AD+P version are built in Korea, apparently are available as a "private label" receiver to anyone with the ability to order their minimum level quantity. Each version has slightly different operating software to reflect the "branded" name on the front plate.

Nokia DVB 2000 S receiver release by factory in Sweden has been delayed. Nokia released pre-production samples for field testing and user feedback in October (see SatFACTS Monthly for November 15), promised revised software version of this free to air Asia + Pacific receiver before end of November. Factory advisory dated November 27 says the new IRD will go into quantity production the week of December 21 and actual shipments will begin the week of December 28.

Pioneer brand IRDs will be appearing soon. Firm is now manufacturing units in UK, plans 80,000 unit production during December with sales primarily into Sweden, France, Italy and Spain.

DirectTV Japan is offering consumers 48 months to pay for digital IRD systems that retail over range of US\$425 - \$600. Firm has fewer than 200,000 subscribers against larger Sky PerfecTV 800,000.

TAB Advisory to Agents

In a letter dated November 13, TAB National Retail Manager David Chote advised TAB agencies

"As you are aware the transition to satellite is being undertaken by SKY in two stages. STAGE ONE - In August, Trackside Channel was added to Sky's existing two channel satellite service SKY Sport and Orange. For those outlets that already had satellite receivers they were re-tuned to receive satellite Trackside. Since August a number of other outlets have had installations undertaken to give you the ability to receive and screen the seven day a week Trackside service.

"STAGE TWO - Stage two of SKY's satellite operation is expected to commence within the next week (1). SKY will be launching a number of new channels onto the satellite. Satellite Trackside will become part of SKY's subscription programming. This means you will need to be a SKY subscriber to receive the seven day week Trackside service.

"UHF Trackside will still be broadcast free to air.

"The existing satellite 'receiver box' in your office will be replaced and a decision required as to whether you wish to retain the SKY UHF 'decoder box'. (Removal of the SKY UHF decoder is optional.)

"The change-out of equipment is to be managed by SKY and their installers. We understand that the cost to complete this exercise will be at your expense."

(1) In fact, the transition from the free to air analogue transmission to the digital conditional access Sky Trackside began with removal of the analogue service November 23 and introduction of the digital service November 26. First installation of digital equipment began November 25.

Digital TV & Radio

USA launch of terrestrial digital (HDTV) began on October 29 with only minor flaws reported. 24 TV stations participated in "national launch" but almost nobody saw the pioneering transmissions because of a severe shortage of DTV receivers for terrestrial use. In major cities such as Philadelphia, there were only two receivers available for the inaugural broadcast and both of those were located at the TV station broadcasting the event. Trade group CEMA estimated 1,000 digital TV receivers were in consumer or retailer hands on start date - not measurable in a TV universe of 97 million homes. In group viewing at Boston Museum of Science, 71% of those watching inaugural telecast said they were "*now interested in purchasing HDTV.*" However, when asked second question concerning HDTV pricing, interest quickly diminished as pricing level was raised to present US\$5,000 (+) range. One observer suggested the early HDTV receivers being shipped are "*so close to being prototypes, they should not have a serial number.*" Samsung home receiver, for example, passes only analogue format signals to external jacks to feed VCR - any digital signal bypasses jacks and cannot be connected to VCR for home recording, "*because of the uncertainty surrounding whether HDTV or digital signals have the same copyright protection as analogue signals.*"

US digital TV broadcasters, who are paying nothing for their new digital TV frequency, will be charged 5% of gross revenue received for any non-TV-transmission services they broadcast within their TV channel assignment. Broadcasters had urged 2% fee.

DTV for PCs was hot new product topic at annual COMDEX show in Las Vegas (November 16-20). Panasonic and Compaq have teamed to announce 2-board DTV tuner and decoder to be available to all manufacturers of PCs by April. System will carry price tag of US\$800 or more for PC makers purchasing 10,000 or more units on annual basis. How that will translate to optional add-on costs for PC buyers is not projected but is likely to be close to US\$2,000. Still, that is far less money than stand alone DTV/HDTV television receivers currently available or forecast for 1999. Compaq/Panasonic system will decode all 18 ATSC formats and output in 480p which can be displayed on all PC monitors. If PC has enhanced software, 720p will be possible. Other firms working on similar products include Hitachi, Sharp, Quadrant, Philips, Zenith (LG Electronics).

AfriStar CD quality digital audio satellite launched late in October has yet to receive formal "license" from (American) FCC to operate. Trio of digital audio satellites include AsiaSat (to 105E) and AmeriStar (95W), both scheduled for 1999 launch.

Argentina has adopted the USA HDTV "standard" with predictions following that all of South America will opt for the US system.

HBO, American pay movie service for cable and DBS, will begin HDTV movie channel service in March (1999). HBO uses 35mm film prints for broadcast masters, believes 60% of current films available to them can be "converted" to 1080i format.

OOPS - The era of profitable PCs is over

It started when the home PC broke the US\$2,000 price "barrier" and has picked up speed. Now home PC packages are available not only from lesser known firms for under US\$1,000 but the big firms (IBM, HP) have joined the battle. And it will get worse - for the small and middle sized PC makers who have sold volume based upon price. The next plateau is going to be US\$500 and there are signs that will be only a temporary resting spot. Driving the prices down is volume - for both the specialised chips that make up a PC and the PCs themselves.

Already, market leader in low cost PCs, Packard Bell, is feeling the pinch. The firm says it cannot compete with new, lower pricing from IBM and others, has no way out except to clear its present inventory before it can begin manufacturing in quantity once again. That is bad news for PB retailers who are being caught short at the height of the Christmas buying season with very low stocks and no hope of replacing those stocks before the second quarter of 1999. Major retailer Sears is caught in the middle on this one, has taken on an HP Pentium 333 MHz machine which it will retail at US\$1,299. It had been expecting a new PB model at US\$499 for the Christmas season. PB has announced laying off up to 1,000 employees, and will reduce number of PC models available by "at least half." Ooops.

Meanwhile, the battle lines for under US\$499 are forming. New Korean start-up firm KDS has announced a US\$399 machine with 266 MHz technology. A "step-up" package will be US\$499 which includes the cashless Intel Celeron processor.

Some computer manufacturers believe the ultimate price floor for entry level home PCs will become zero-dollars. How is that? The PCs, they predict, will be given away as an inducement for buyers to agree to purchase either software packages or Internet service packages. How far away? *"Much sooner than most realise"* is the note of PB Senior Marketing VP Mal Ransom. *"It is not a matter of if, but when."*

Consumer Electronics

Toshiba's DVD player model SD7108 will not appear in marketplace until *"copyright snags are ironed out."* Firm has been promoting DVD player as *"first with 480p-equivalent progressive scan video, free of NTSC line structure and other artefacts common to conventional DVD players."* Problem seems to be with Content Scrambling System (CSS) provision for Macrovision anti-copy feature. System employed by present DVD players apparently does not create artefacts from Macrovision content whereas planned SD7108 possibly destroyed the Macrovision protection function. The player was designed to feed 480p picture directly into television sets equipped with special input jack which was essentially halfway step to digital to digital display technology. However, testing in Japan revealed that while Toshiba brand sets played properly with new progressive scan output, many competitive sets did not.

DVD player universe passed 1 million mark during October with 163,074 players shipped.

Latest DIVX snafu. Circuit City is blaming shortage of RCA brand DIVX players for latest reported slow down in rollout of controversial pay to view digital video disc system. DIVX now claims 250 rental titles in inventory. Thomson in response said it is delivering *"every DIVX player we can produce at Juarez, Mexico plant"* and facility is running at 70% of capacity. Spokesman added, *"production shortfalls are typical of other product ramp-ups."* DIVX players are said to be in stock at more than 800 stores nation-wide in USA complicating the instant turn on and "ramp up" of inventory. Sony has issued statement that it will "only support DIVX when product is well established."

Taiwan OEM Acer had 60% drop in 3rd quarter operating profit which it blames on rapid dive in semiconductor product pricing world-wide. Firm took US\$492 million hit from depreciated value of semiconductor and chip inventory as pricing for products saw rapid decline in 90 day period (see "OOPS" above).

Zenith, closing down their manufacturing plants, but retaining "brand name" in consumer electronics field, has new home VCR which uses talking chip technology to guide the user through set-up of home video products. In an ever increasing world of written instructions which defy consumer comprehension, Zenith believes a VCR that "talks to" the consumer is the answer.

Sony Computer Entertainment and Nintendo are planning cuts at retail for their PlayStation and N64 product to US\$99 "by mid 1999." Reason for pre-announced cuts? To clear inventory of present models before Sega's Dreamcast product is launched at end of third quarter (1999). Presently, PlayStation and N64 carry retail pricing in region of US\$129. Sony expects current year sales of PlayStation will top 8 million units (4.5 million in last complete sales year); the N64 expects to sell 4.4 million.

Towards "Full Disclosure"

New Zealand's Minister of Communications Maurice Williamson has issued a "discussion paper" (33 pages in length) seeking public comment on a proposal to modify the rules governing how much information telecommunication providers are required to disclose to the public. In particular, the paper asks should those providing 0800 services be required to disclose operating agreements, interconnection agreements including side letters setting out special conditions of agreement? The thrust of the proposed change appears to be directed primarily at Telecom NZ which as a monopoly provider of local loop services has increasingly been called to the carpet for what some would-be competitors have termed predatory practices. Submissions are due by December 23, a copy of the discussion paper booklet is available from David King, Manager Communications Policy, at (tel) 04-472-0030 or (fax) 04-473-9930.

Hitachi will introduce Home Multimedia Station (HMS) in September. Device, priced at US\$1,300, combines digital satellite receiver, DVD player, Internet access system and will be equipped with software to allow the user to edit video sources. They describe the unit as a "DVD-RAM server."

Panasonic and Philips, appearing at COMDEX show in Las Vegas, demonstrated wireless link between home PC and TV sets elsewhere in home/facility. Systems utilise 5.7 GHz microwave frequency to transmit whatever the PC screen shows to one or more TV sets equipped with "transceivers." Return channel connecting TV set(s) back to PC uses 900 MHz spread spectrum transmitter. Users with remote keyboards can access "mother PC" from remote location, have full control of normal PC functions accessed by wire-connected keyboard. Pricing will be in range of US\$500. One plus - a DVD (movie) played on PC can be viewed on remote TV set(s) through system.

Compaq has demonstrated first home PCs with built-in ADSL modem. Priced at US\$1,500, the unit is capable of data transfers up to 1.5 Mbps.

Philips is closing as many as 84 plants world-wide over next 4 years. CEO Cor Boonstra described the firm's present financial situation as "*grim*."

Radar detector manufacturer Cobra blames downturn in Russian economy for drop in 3rd quarter net profits from US\$2.6 million to US\$678,000.

Cable/Fibre/MMDS/Pay TV

Not quite as reported. Newspaper reports that Auckland based Internet group IHUG is planning to invade the world of pay-TV through the PAS-2 Ku band data stream now being tested for Internet delivery are not quite accurate. Reports claimed IHUG was readying "*42 channel pay TV service to begin in December*" in competition to Sky. The truth is far simpler and much less developed than the report indicated. IHUG found itself unable to say "no" to an offer from NZ Telecom which wished to unload their pay per view nCUBE video file server equipped with a "raid array." Telecom NZ had equipped itself with the capacity to deliver movies in an NVOD (near video on demand) format just prior to closing up shop in November 1997. The nCUBE device allowed multiple movies with staggered start times to be programmed through the cable network to allow viewers to select the "next available start time" (typically in 30 minute increments) for in-home viewing. StarnetTV is one possible business plan, according to insiders at IHUG, but at this point in time the company has no movie supplier contracts (essential for launching a pay per view service) and only limited technical ability to include MPEG-2 digital television within their present Internet satellite feed service through PAS-2, Ku-band. StarnetTV has also been trialled through a terrestrial 12 GHz transmission service that reaches a few hundred users in the greater Auckland area from a transmission aerial located atop the Sky Tower but even for trial purposes IHUG does not yet have programming rights for redistribution of television services. "*The business plan changes weekly*" an IHUG representative told CTD. "*We could if today's plan is followed offer 6 channels of pay-TV through the Auckland terrestrial service sometime in 1999 with the capacity to expand to a total of 42 channels of which we envision 30 being pay per view fare.*"

Cable and Wireless Optus Ltd's Dick Brown, the new Chairman of the renamed firm, in Australia to meet with officials surprised many by revealing, "*Our (1997) agreement with Rupert Murdoch allowing for the rationalisation of pay-TV in Australia is on track.*" He explained that one of the agreed to principals was that "*there should be open and equal access to content among all competing companies.*" He added, "*these things take time and we're working through the details and I think there is a lot of progress being made.*" Australian media pundits question the accuracy of Brown's statements, pointing out that his agreement with Rupert Murdoch reportedly turned on Optus supporting a 1997 proposal that would have allowed Foxtel to take over Galaxy - prior to the time Galaxy (Australis Media Ltd.) was shut down by receivers and the courts. Optus and Foxtel have had routine meetings since the failure of Galaxy last May, some of which have provided leaks to the press concerning progress - or lack of progress - towards rationalisation of the Australian pay-TV scene. That

Foxtel is still pursuing a path of universal access to all programming regardless of its source remains highly unlikely, however.

Optus Vision, the cable delivery company, has revamped their low end (Australian \$9.95) entry level TV package. The service has added Disney Channel, MTV, Ovation and Odyssey programming channels provided cable subscribers also avail themselves of the firm's cable-telephone service as well. Optus marketing is being reworked to marry the cable TV and telephone groups into a single entity - it becoming more apparent that with two separate "offerings" to the same potential customers, there has been massive confusion at the consumer level. Plans to offer a stand alone Optus Vision by satellite service remain on ice while efforts to reach agreement with Foxtel proceed (see prior report). A new Australian Business News service is being planned, basically CNBC with Australian content. The Optus deal with Channel 7 originally called for two sport channels, a drama channel, a general entertainment channel and a movie channel. The drama channel plan was to draw from Australian drama in the 70s/80s/90s while the movie channel was to be in a side deal with MGM (which at the time Channel 7 owned a share of).

Discovery Channel, mainstay of Sky NZ and also appearing on Austar/Foxtel pay-TV platforms and cable, says it will not renew its "exclusive/agency" agreement with Sky NZ when it expires December 31. The programmer firm is offering existing Discovery and new Animal Planet in package deal with cable and DBS/DTH operators on a non-exclusive basis effective 1 January. Contact is Joe Nguyen at (tel)548-0588 and (fax) 65-548-0598.

Sky NZ's TAB Sports Cafe programme is creating its own "sports bar" facility at Prince's Wharf (Shed 19, behind Ports of Auckland building). The television show with limited audience seating capacity will move from the studio to the to-be-opened commercial bar to be named "Leftfield." The new facility is being constructed as a giant television "set" to allow patrons to participate in the Wednesday night TV programme as well as become immersed in the leading edge technology of live and tape delayed sporting event viewing.

Proposed TCI + AT&T merger is drawing criticism from various public interest and commercial groups who see merger as bad for America. Most of the negative responses centre around how TCI and AT&T will treat Internet connections and Internet Service Providers (ISPs) after the merger. AT&T and TCI response to the demands for special rules to govern the merger has been a warning - mess with this deal too much and it will be 'off'. TCI financials report increase of 4% in cable revenues in 3rd quarter, but losses continue to be sustained by @Home Internet operation (22,000 subscribers, losses of US\$9 million) and by new Cable Telephony operation (loss of US\$3 million).

Ratings firm Nielsen is developing method of measuring Internet usage and in particular monitoring of how often Internet advertising is seen, by whom and for how long. Firm expects to unveil system in first quarter of 1999. They are buying equity position in NetRatings firm which has developed technology for this purpose.

DBS operators in United States will be required to set aside 4% of their total programme channel capacity for "public interest" programmers. Cable television has a similar channel capacity rule that allows local groups to programme cable channels with materials of their own creation. How the DBS public interest channels will work, given the nation-wide universe of the service coverage, has not been explained. The channel capacity will be free of charge to the users.

Terrestrial Broadcasting

Digital terrestrial broadcasting launched in UK on November 15th - the first multiple channel service for consumers in the world. The ONdigital service is in direct competition with News Corp's BSkyB for UK viewers. BSkyB claims 150+ programming channels (many of which are audio only, or pay per view that is not yet technically available) while ONdigital is delivering 30 programme channels. Primary advantage to ONdigital - once the set-top box is paid for, viewers will have no-charge access to BBC, Granada, Carleton services while BSkyB charges US\$10 per month for a similar package (see CTD for September 30). London stores demonstrating set-top digital decoder boxes report a four week wait for delivery. Of 81 UK transmission sites, 23 now carry digital services with 7 more to go on line before the end of the year - all 81 by the end of 1999. To ease pressure on consumers, UK authorities have decided not to publicise a "switch off date" for existing analogue. *"We have got to make a success of digital television, first."*

American ABC network is blamed for dragging down 3rd quarter profits for parent Disney; US\$296 million versus US\$390 million year ago. Subscription growth of Disney owned ESPN was one bright spot in report.

US consumer survey. 96% of viewers who receive their TV through digital satellite service are "satisfied" with picture quality; 36% of those who depend solely on off-air terrestrial antennas were "satisfied" with picture quality. Study did not include cable viewers.

SPRSCS '99: March 24-27, 1999. Info (tel) 64-9-406-0651 or (fax) 64-9-406-1083.
Event includes twin 2-day Mark Long Certificate courses, creation of television programming for satellite distribution in Asia, Pacific and Europe.

January 1st, 2000.
As I predicted, the millennium-bug
hype was greatly overblown.



I've seen little evidence of
this so-called "bug".

